FACTSHEET

Plant Protection & Quarantine

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Eradicating Boll Weevil: Tools of the Trade

The Tools:
- The Trap
- The Pheromone Attractant
- Cultural Practices
- The Insecticide

The Trap

Growers and the public alike may be curious about the plastic, yellow-green fluorescent traps that are highly visible around cotton fields during the main eradication phase. Initially these traps may be placed from 100 to 250 feet apart around the edge of every cotton field. After eradication, the cotton is monitored with 1 trap for every 10 acres to alert managers to any reinfestation. The size, shape, and color of the trap have been proven attractive to the weevil through years of careful research. The trap is an inverted cup, topped with a cone-shaped wire mesh screen. A capture chamber on top of the cone contains a dispenser for boll weevil attractant. A chip with insecticide is added to prevent weevils from escaping. The interchangeable parts make the trap economical.

The Pheromone

The pheromone is a chemical called grandlure, a laboratory version of the weevil's own attractant, used by the insects to call each other together for mating. Fresh 10-mg doses of grandlure are placed in traps every 14 days. As the weevil population is reduced, the pheromone becomes increasingly effective at "calling" weevils to the trap. Armed with information on weevil populations provided by the baited traps, officials know when and where to apply necessary treatments. Continuous trapping helps determine the treatment efficacy. At very low populations levels, the trap also serves as a control device, ridding a field of the last few pests. Trapping with grandlure can detect weevils at lower levels than visual surveys. Producers should continue scouting their cotton for other pests, however, because the eradication program will treat for boll weevil only. Growers will continue to be responsible for control of other pests.

Cultural Practices

Growers are encouraged to follow good cultural practices that will limit early and late food sources for the weevil:

- Use later planting dates.
- Select early maturing cotton varieties.
- Harvest early.
- Destroy stalks immediately.

Other production practices also make good sense and are encouraged. These include keeping clear field borders and not planting cotton next to environmentally sensitive areas, such as schoolyards, churches, and bodies of water.

The Insecticide

The program begins with fall treatments in areas where significant numbers of weevils successfully overwinter. These treatments are applied every 7 to 14 days, depending on temperature and plant growth. In succeeding years, a field is treated only if a threshold number of weevils is trapped. The insecticide used in the eradication program is selected by the Boll Weevil Eradication Foundation, a group elected to represent cotton producers. The foundation contracts with a chemical company and aerial applicators on an annual basis. Eligible insecticides must be approved by the Environmental Protection Agency as environmentally safe for use on cotton. The program uses only short-lived materials that will not carry over in the soil from one season to the next. Malathion has been used for the last few seasons; it is commonly used in home and garden preparations and many mosquito-abatement efforts.